10/509,823 Dan Hudak

10/509823
DT04 Rec'd PCT/PTO 30 SEP 2004

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~~Cheryl Tarine~~ Dan Hudak 330-535-2220 Called 6/30/06

IN THE CLAIMS:

Please amend the claims as follows:

I-III - 1,3,4

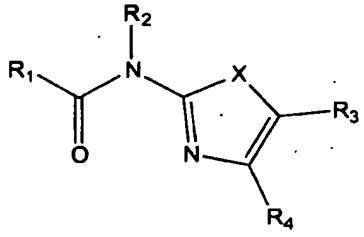
IV-VI - 2 ~~3~~ 11

VII - IX - 4, 11

X - 5-10

1. (Currently Amended) ~~A methionine aminopeptidase inhibitor represented by comprising: a~~ compound having the general ~~formular~~ formula

I - VI



wherein

R_1 is selected from the group ~~consisting of~~ ~~comprising~~ consisting of

I - III
- (1) C_1-C_4 alkyl,
- (2) C_3-C_6 cycloalkyl,
- (3) Aryl,

IV - VI
- (4) 2-, 3- or 4- pyridyl,

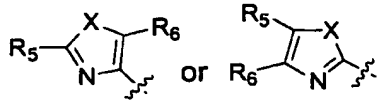
where (1) and (2) can be optionally substituted with 1, 2, or 3 substituents independently selected from the group ~~consisting of~~ comprising halogen atoms, C_1-C_6 alkoxy or hydroxy,

and

where (3) and (4) can be optionally substituted with 1, 2, or 3 substituents independently selected from the group ~~consisting of~~ comprising C_1-C_4 alkyl, nitro, carboxyl, aldehyde, alkoxy, alkylamino, acylamide, alkylthio,

and

VII - IX (5) heterocycle having the following structure:



where R_5, R_6 are selected independently from the group ~~consisting of~~ comprising consist of

(a) hydrogen,

(b) C_1-C_4 alkyl

(c) C_3-C_6 cycloalkyl,

(d) Aryl,

(e) 2-, 3- or 4- pyridyl,

where (b) and (c) can be optionally substituted with 1, 2, or 3 substituents independently selected from the group ~~consisting of~~ comprising halogen atoms, C_1-C_6 alkoxy or hydroxy,

and

where (d) and (e) can be optionally substituted with 1, 2, or 3 substituents independently selected from the group ~~consisting of~~ comprising C_1-C_4 alkyl, nitro, carboxyl, aldehyde, alkoxy, alkylamino, acylamide, alkylthio,

X is selected from the group ~~consisting of~~ comprising O, S, N;

R_2 is selected from the group ~~consisting of~~ comprising

(1) hydrogen,

(2) C_1-C_4 alkyl,

(3) C_3-C_6 cycloalkyl,

(4) Aryl,

where (2) and (3) can be optionally substituted with 1, 2, or 3 substituents independently selected from the group ~~consisting of~~ comprising halogen atoms, C_1-C_6 alkoxy or hydroxy,

and

where (4) can be optionally substituted with 1, 2, or 3 substituents independently selected from the group ~~consisting of~~ comprising C_1-C_4 alkyl, nitro, carboxyl, aldehyde, alkoxy, alkylamino, acylamide, alkylthio;

R_3 is selected from the group ~~consisting of~~ comprising

(1) hydrogen,

(2) halogen atoms,

(3) C_1-C_4 alkyl, which can be optionally substituted with 1, 2, or 3 substituents independently selected from the group ~~consisting of~~ comprising halogen atoms, C_1-C_6 alkoxy or hydroxy,

(4) Aryl, which can be optionally substituted with 1, 2, or 3 substituents independently selected from the group ~~consisting of~~ comprising C_1-C_4 alkyl, nitro, carboxyl, aldehyde, alkoxy, alkylamino, acylamide, alkylthio;

R_4 is selected from the group ~~consisting of~~ comprising

(1) hydrogen,

(2) C_1-C_4 alkyl, which can be optionally substituted with 1, 2, or 3 substituents independently selected from the group ~~consisting of~~ comprising halogen atoms, C_1-C_6 alkoxy or hydroxy,

(3) Aryl, which can be optionally substituted with 1, 2, or 3 substituents independently selected from the group ~~consisting of~~ comprising C_1-C_4 alkyl, nitro, carboxyl, aldehyde, alkoxy, alkylamino, acylamide, carbonylamide, alkylthio, methylthio, ethylthio;

X is selected from the group ~~consisting of~~ comprising O, S, N.

IV-VI

2. (Currently Amended) A methionine aminopeptidase inhibitor according to claim 1 in which

R_1 is selected from the group ~~consisting of~~ comprising 2-, 3- or 4- pyridyl, each can be optionally substituted with 1, 2, or 3 substituents independently selected from the group ~~consisting of~~ comprising C_1-C_4 alkyl, halogen atoms, nitro, carboxyl, aldehyde, alkoxy, alkoxycarbonyl, alkylamino, acylamide;

R_2 is selected from the group ~~consisting of~~ comprising

(1) hydrogen,

(2) C_1-C_6 alkyl,

(3) C_2-C_6 alkenyl,

(4) C_2-C_6 alkynyl,

(5) C_3-C_6 cycloalkyl

(6) Aryl,

(7) benzyl

where (2) and (5) can be optionally substituted with 1, 2, or 3 substituents independently selected from the group ~~consisting of~~ comprising halogen atoms, C_1-C_6 alkoxy or hydroxy,

and

where (6) can be optionally substituted with 1, 2, or 3 substituents independently selected from the group ~~consisting of~~ comprising C_1-C_4 alkyl, nitro, carboxyl, aldehyde, alkoxy, alkylamino, acylamide, carbonylamide, alkylthio;

R_3 is selected from the group ~~consisting of~~ comprising hydrogen, Br, C_1-C_4 alkyl;

R_4 is selected from the group ~~consisting of~~ comprising

(1) hydrogen,

(2) C_1-C_4 alkyl,

(3) Aryl,

where (3) can be optionally substituted with 1, 2, or 3 substituents independently selected from the group ~~consisting of~~ comprising C_1-C_4 alkyl, nitro, carboxyl, aldehyde, alkoxy, alkylamino, acylamide, carbonylamide, alkylthio;

3. (Currently Amended) A methionine aminopeptidase inhibitor according to claim 1 in which

I-III

R_1 is selected from the group ~~consisting of~~ comprising aryl, which can be optionally substituted with 1, 2, or 3 substituents independently selected from the group ~~consisting of~~ comprising nitro, alkylamino, halogen atoms, C_1-C_4 alkoxy, hydroxy, carboxyl, benzyl;

R_2 is selected from the group ~~consisting of~~ comprising hydrogen, C_1-C_4 alkyl;

R_3 is selected from the group ~~consisting of~~ comprising hydrogen, halogen atoms, C_1-C_4 alkyl;

R_4 is selected from the group ~~consisting of~~ comprising

(1) hydrogen,

(2) C_1-C_4 alkyl,

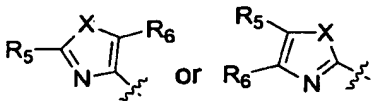
(3) Aryl,

where (3) can be optionally substituted with 1, 2, or 3 substituents independently selected from the group ~~consisting of~~ comprising C_1-C_4 alkyl, halogen atoms, nitro, carboxyl, aldehyde, alkoxy, alkylamino, acylamide, alkylthio.

4. (Currently Amended) A methionine aminopeptidase inhibitor according to claim 1 in which

R_1 is selected from the following heterocycle structure:

VII-IX



X is selected from the group ~~consisting of~~ comprising O, S, NH;

R_2 is selected from the group ~~consisting of~~ comprising hydrogen, C_1-C_4 alkyl;

R_3 is hydrogen;

R_4 is hydrogen;

R_5, R_6 are selected independently from the group ~~consisting of~~ comprising

(a) hydrogen,

(b) C_1-C_4 alkyl,

(c) C_3-C_6 cycloalkyl,

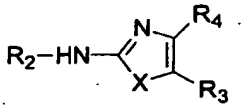
(d) Aryl,

(e) 2-, 3- or 4- pyridyl,

where (b) and (c) can be optionally substituted with 1, 2, or 3 substituents independently selected from the group ~~consisting of~~

comprising halogen atoms, C_1-C_6 alkoxy or hydroxy,
and
where (d) and (e) can be optionally substituted with 1, 2, or 3 substituents independently selected from the group ~~consisting of~~ comprising C_1-C_4 alkyl, nitro, carboxyl, aldehyde, alkoxy, alkylamino, acylamide, alkylthio,

5. (Original) A process for the preparation of a methionine aminopeptidase inhibitor as defined in claim 1 which comprises condensating of a compound of the general formula R1COY with a compound of the general formula



in which Y represents hydroxyl, halogen atoms and the other activated group.

6. (Original) A process for the preparation of a methionine aminopeptidase inhibitor as defined in claim 5 wherein the dehydration reagents used in this reaction may be DCC, ECD, DIC, HBTU.

7. (Original) A process for the preparation of a methionine aminopeptidase inhibitor as defined in claim 5 wherein the solvent used in this condensation reaction may be CH_2Cl_2, DMF, CH_2ClCH_2Cl, toluene, benzene, H_2O, dioxane or the mixture of the above solvents.

8. (Original)A process for the preparation of a methionine aminopeptidase inhibitor as defined in claim 5 wherein the reaction temperature is from -20°C to room temperature, in some cases, the heating is necessary, from 50° C to 130°C.

9. (Original) A process for the preparation of a methionine aminopeptidase inhibitor as defined in claim 5 wherein the proper activated reagents of the condensation reaction were used, such as, HOBT pentafluorophenol, molecular series.

10. (Original) A process for the preparation of a methionine aminopeptidase inhibitor as defined in claim 5 wherein the proper base of the condensation reaction such as Et_3N, I-Pr_2EtN, Pyridine, DMAP were used as catalyst.

11. (Original) A methionine aminopeptidase inhibitor as claimed in claim 1, wherein these compounds were used as antitumor, and anti-infection drugs.

Respectfully submitted,

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